

STD TREATMENT GUIDELINES TABLE FOR ADULTS & ADOLESCENTS 2010

These guidelines reflect the recommendations of the 2010 CDC STD Treatment Guidelines and serve as a quick reference for treatment of STIs encountered in an outpatient setting. This is not an exhaustive list of effective treatments, so refer to the complete document from the CDC (www.cdc.gov/std/treatment) for more information or call the STD Program listed below. These guidelines are for clinical guidance and not to be construed as standards or inflexible rules. Clinical and epidemiological services are available through your STD Program, and staff are available to assist healthcare providers with confidential notification of sexual partners of patients infected with HIV and other STIs. For assistance, please contact:

Center for Sexually Transmitted Infection Prevention, Maryland DHMH/IDEHA, 410-767-6690, <http://ideha.dhmf.maryland.gov/cstip/>

DISEASE	RECOMMENDED REGIMENS	DOSE/ROUTE	ALTERNATIVE REGIMENS: To be used if medical contraindication to recommended regimen.
CHLAMYDIA			
Uncomplicated Genital/Rectal/Pharyngeal Infections ¹	<ul style="list-style-type: none">Azithromycin orDoxycycline ²	1 g po 100 mg po bid x 7 d	<ul style="list-style-type: none">Erythromycin base 500 mg po qid x 7 d orErythromycin ethylsuccinate 800 mg po qid x 7 d orLevofloxacin² 500 mg po qd x 7 d orOfloxacin² 300 mg po bid x 7 d
Pregnant Women ³	<ul style="list-style-type: none">Azithromycin orAmoxicillin	1 g po 500 mg po tid x 7 d	<ul style="list-style-type: none">Erythromycin base 500 mg po qid x 7 d orErythromycin base 250 mg po qid x 14 d orErythromycin ethylsuccinate 800 mg po qid x 7 d orErythromycin ethylsuccinate 400 mg po qid x 14 d
GONORRHEA: <i>Ceftriaxone is the preferred treatment for adults and adolescents with uncomplicated gonorrhea. Dual therapy with ceftriaxone 250 mg IM (increased from 125 mg) <u>Plus</u> azithromycin 1 g po or doxycycline 100 mg po bid x 7 d is recommended for all patients with gonorrhea regardless of chlamydia test results.</i> ⁴			
Uncomplicated Genital/Rectal Infections ¹	Dual therapy with <ul style="list-style-type: none">Ceftriaxone or, if not an optionCefixime ⁵ PLUS <ul style="list-style-type: none">Azithromycin orDoxycycline	250 mg IM 400 mg po 1 g po 100 mg po bid x 7 d	<ul style="list-style-type: none">Cefpodoxime 400 mg po orCefuroxime axetil 1 g po orAzithromycin ⁶ 2 g po in a single dose
Pharyngeal Infections	Dual therapy with <ul style="list-style-type: none">Ceftriaxone PLUS <ul style="list-style-type: none">Azithromycin orDoxycycline	250 mg IM 1 g po 100 mg po bid x 7 d	<ul style="list-style-type: none">Azithromycin ⁶ 2 g po in a single dose
Pregnant Women ³	Dual therapy with <ul style="list-style-type: none">Ceftriaxone or, if not an optionCefixime ⁵ PLUS <ul style="list-style-type: none">Azithromycin	250 mg IM 400 mg po 1 g po	<ul style="list-style-type: none">Cefpodoxime 400 mg po orCefuroxime axetil 1 g po orAzithromycin ⁶ 2 g po in a single dose
PELVIC INFLAMMATORY DISEASE ^{4, 7, 8}	Parenteral ⁹ <ul style="list-style-type: none">Either Cefotetan or Cefoxitin plus Doxycycline ² orClindamycin plus Gentamicin IM/Oral <ul style="list-style-type: none">Either Ceftriaxone or Cefoxitin with Probenecid plus Doxycycline ² plus Metronidazole if BV is present or cannot be ruled out	2 g IV q 12 hrs 2 g IV q 6 hrs 100 mg po or IV q 12 hrs 900 mg IV q 8 hrs 2 mg/kg IV or IM followed by 1.5 mg/kg IV or IM q 8 hrs 250 mg IM 2 g IM, 1 g po 100 mg po bid x 14 d 500 mg po bid x 14 d	Parenteral ^{9a} Ampicillin/Sulbactam 3 g IV q 6 hrs plus Doxycycline ² 100 mg po or IV q 12 hrs Oral ¹⁰ <ul style="list-style-type: none">Levofloxacin ² 500 mg po qd x 14 d orOfloxacin ² 400 mg po bid x 14 d orCeftriaxone 250 mg IM in a single dose and Azithromycin 1 g po once a week for 2 weeks plusMetronidazole 500 mg po bid x 14 d if BV is present or cannot be ruled out
CERVICITIS ^{4, 7, 11}	<ul style="list-style-type: none">Azithromycin orDoxycycline ² plusMetronidazole if BV or trichomoniasis is present	1 g po 100 mg po bid x 7 d 500 mg po bid x 7 d	
NONGONOCOCCAL URETHRITIS ⁷	<ul style="list-style-type: none">Azithromycin orDoxycycline	1 g po 100 mg po bid x 7 d	<ul style="list-style-type: none">Erythromycin base 500 mg po qid x 7 d orErythromycin ethylsuccinate 800 mg po qid x 7 d orLevofloxacin 500 mg po qd x 7 d orOfloxacin 300 mg po bid x 7 d
EPIDIDYMITIS ^{4, 7}	Likely due to Gonorrhea or Chlamydia <ul style="list-style-type: none">Ceftriaxone plus Doxycycline Likely due to enteric organisms <ul style="list-style-type: none">Levofloxacin ¹² orOfloxacin ¹²	250 mg IM 100 mg po bid x 10 d 500 mg po qd x 10 d 300 mg po bid x 10 d	
CHANCROID	<ul style="list-style-type: none">Azithromycin orCeftriaxone orCiprofloxacin ² orErythromycin base	1 g po 250 mg IM 500 mg po bid x 3 d 500 mg po tid x 7 d	
LYMPHOGRANULOMA VENEREUM	<ul style="list-style-type: none">Doxycycline ²	100 mg po bid x 21 d	<ul style="list-style-type: none">Erythromycin base 500 mg po qid x 21 d orAzithromycin 1 g po q week x 3 weeks
TRICHOMONIASIS ^{13,14}			
Non-pregnant women	<ul style="list-style-type: none">Metronidazole orTinidazole ¹⁵	2 g po 2 g po	<ul style="list-style-type: none">Metronidazole 500 mg po bid x 7 d
Pregnant Women	<ul style="list-style-type: none">Metronidazole	2 g po	<ul style="list-style-type: none">Metronidazole 500 mg po bid x 7 d

1. Annual screening for women aged 25 years or younger. Nucleic acid amplification tests (NAATs) are recommended. All patients should be re-tested 3 months after treatment for chlamydia or gonorrhea.

2. Contraindicated for pregnant and nursing women.

3. Every effort to use a recommended regimen should be made. Test-of-cure follow-up (preferably by NAAT) 3-4 weeks after completion of therapy is recommended in pregnancy.

4. If treatment failure is suspected because GC has been documented, the patient has been treated with a recommended regimen for GC, and symptoms have not resolved, then perform a test-of-cure using culture and antibiotic susceptibility testing and report to the local health department. For clinical consult, call the CA STD Control Branch at 510-620-3400. For further guidance, go to www.std.ca.gov ("STD Guidelines").

5. Oral cephalosporins give lower and less-sustained bacteriocidal levels than ceftriaxone 250 mg and have limited efficacy for treating pharyngeal GC. Therefore, ceftriaxone is the preferred medication.

6. For patients with cephalosporin allergy, or severe penicillin allergy, (e.g., anaphylaxis, Stevens Johnson syndrome, and toxic epidermal necrolysis), azithromycin is an option. However, because of GI intolerance and concerns regarding emerging resistance, it should be used with caution.

7. Testing for gonorrhea and chlamydia is recommended because a specific diagnosis may improve compliance and partner management, and because these infections are reportable by California law.

8. Evaluate for bacterial vaginosis. If present or cannot be ruled out, also use metronidazole.

9. Discontinue 24 hours after patient improves clinically and continue with oral therapy for a total of 14 days.

10. Fluoroquinolones can be considered for PID if the risk of GC is low, a NAAT test for GC is performed, and follow-up of the patient can be assured. If GC is documented, the patient should be re-treated with the recommended ceftriaxone and doxycycline regimen. If cephalosporin therapy is not an option, the addition of azithromycin 2 g orally as a single dose to a quinolone-based PID regimen is recommended.

11. If local prevalence of gonorrhea is greater than 5%, treat empirically for gonorrhea infection.

12. If gonorrhea is documented, change to a medication regimen that does not include a fluoroquinolone.

13. For suspected drug-resistant trichomoniasis, rule out re-infection; see 2010 CDC Guidelines, Trichomonas Follow-up , p. 60, for other treatment options, and evaluate for metronidazole-resistant *T. vaginalis*. For laboratory and clinical consultations, contact CDC at 404-718-4141; <http://www.cdc.gov/std>.

14. For HIV-positive women with trichomoniasis, metronidazole 500 mg po bid x 7 d is more effective than metronidazole 2 g orally.

15. Safety in pregnancy has not been established; pregnancy category C.

DISEASE	RECOMMENDED REGIMENS	DOSE/ROUTE	ALTERNATIVE REGIMENS: To be used if medical contraindication to recommended regimen
BACTERIAL VAGINOSIS			
Adults/Adolescents	<ul style="list-style-type: none"> Metronidazole or Metronidazole gel or Clindamycin cream ¹⁶ 	500 mg po bid x 7 d 0.75%, one full applicator (5g) intravaginally qd x 5 d 2%, one full applicator (5g) intravaginally qhs x 7 d	<ul style="list-style-type: none"> Tinidazole ¹⁵ 2 g po qd x 2 d or Tinidazole ¹⁵ 1 g po qd x 5 d or Clindamycin 300 mg po bid x 7 d or Clindamycin ovules 100 mg intravaginally qhs x 3 d
Pregnant Women	<ul style="list-style-type: none"> Metronidazole or Metronidazole or Clindamycin 	500 mg po bid x 7 d 250 mg po tid x 7 d 300 mg po bid x 7 d	
ANOGENITAL WARTS			
External Genital/Perianal Warts	Patient-Applied <ul style="list-style-type: none"> Imiquimod ^{15,16} 5% cream or Podofilox ¹⁵ 0.5% solution or gel or Sinecatechins ¹⁵ 15% ointment Provider-Administered <ul style="list-style-type: none"> Cryotherapy or Podophyllin ¹⁵ resin 10%-25% in tincture of benzoin or Trichloroacetic acid (TCA) 80%-90% or Bichloroacetic acid (BCA) 80%-90% or Surgical removal 	Topically qhs 3 x wk up to 16 wks Topically bid x 3 d followed by 4 d no tx for up to 4 cycles Topically tid, for up to 16 wks Apply once q 1-2 wks Apply once q 1-2 wks Apply once q 1-2 wks Apply once q 1-2 wks	Alternative Regimen <ul style="list-style-type: none"> Intralesional interferon or Laser surgery or Photodynamic therapy or Topical cidofovir
Mucosal Genital Warts ¹⁷	<ul style="list-style-type: none"> Cryotherapy or TCA or BCA 80%-90% or Podophyllin ¹⁵ resin 10%-25% in tincture of benzoin or Surgical removal 	Vaginal, urethral meatus, and anal Vaginal and anal Urethral meatus only Anal warts only	
ANOGENITAL HERPES ¹⁸			
First Clinical Episode of Anogenital Herpes	<ul style="list-style-type: none"> Acyclovir or Acyclovir or Famciclovir or Valacyclovir 	400 mg po tid x 7-10 d 200 mg po 5x/day x 7-10 d 250 mg po tid x 7-10 d 1 g po bid x 7-10 d	
Established Infection Suppressive Therapy ^{19, 20}	<ul style="list-style-type: none"> Acyclovir or Famciclovir ¹⁹ or Valacyclovir or Valacyclovir 	400 mg po bid 250 mg po bid 500 mg po qd 1 g po qd	
Episodic Therapy for Recurrent Episodes	<ul style="list-style-type: none"> Acyclovir or Acyclovir or Acyclovir or Famciclovir or Famciclovir or Famciclovir or Famciclovir or Valacyclovir or Valacyclovir 	400 mg po tid x 5 d 800 mg po bid x 5 d 800 mg po tid x 2 d 125 mg po bid x 5 d 1000 mg po bid x 1 d 500 mg once, then 250 mg bid x 2 d 500 mg po bid x 3 d 1 g po qd x 5 d	
HIV Co-Infected ²⁰			
Suppressive Therapy ¹⁹	<ul style="list-style-type: none"> Acyclovir or Famciclovir ¹⁹ or Valacyclovir 	400-800 mg po bid or tid 500 mg po bid 500 mg po bid	
Episodic Therapy for Recurrent Episodes	<ul style="list-style-type: none"> Acyclovir or Famciclovir or Valacyclovir 	400 mg po tid x 5-10 d 500 mg po bid x 5-10 d 1 g po bid x 5-10 d	
SYPHILIS ^{21, 22}			
Primary, Secondary, and Early Latent	<ul style="list-style-type: none"> Benzathine penicillin G 	2.4 million units IM	<ul style="list-style-type: none"> Doxycycline ²³ 100 mg po bid x 14 d or Tetracycline ²³ 500 mg po qid x 14 d or Ceftriaxone ²³ 1 g IM or IV qd x 10-14 d
Late Latent and Latent of Unknown Duration	<ul style="list-style-type: none"> Benzathine penicillin G 	7.2 million units, administered as 3 doses of 2.4 million units IM each, at 1-week intervals	<ul style="list-style-type: none"> Doxycycline ²³ 100 mg po bid x 28 d or Tetracycline ²³ 500 mg po qid x 28 d
Neurosyphilis ²⁴	<ul style="list-style-type: none"> Aqueous crystalline penicillin G 	18-24 million units daily, administered as 3-4 million units IV q 4 hrs x 10-14 d	<ul style="list-style-type: none"> Procaine penicillin G, 2.4 million units IM qd x 10-14 d plus Probenecid 500 mg po qid x 10-14 d or Ceftriaxone ²³ 2 g IM or IV qd x 10-14 d
Pregnant Women ²⁵			
Primary, Secondary, and Early Latent	<ul style="list-style-type: none"> Benzathine penicillin G 	2.4 million units IM	<ul style="list-style-type: none"> None
Late Latent and Latent of Unknown Duration	<ul style="list-style-type: none"> Benzathine penicillin G 	7.2 million units, administered as 3 doses of 2.4 million units IM each, at 1-week intervals	<ul style="list-style-type: none"> None
Neurosyphilis ²⁴	<ul style="list-style-type: none"> Aqueous crystalline penicillin G 	18-24 million units daily, administered as 3-4 million units IV q 4 hrs x 10-14 d	<ul style="list-style-type: none"> Procaine penicillin G, 2.4 million units IM qd x 10-14 d plus Probenecid 500 mg po qid x 10-14 d

15. Safety in pregnancy has not been established; pregnancy category C.

16. May weaken latex condoms and contraceptive diaphragms.

17. Cervical and intra-anal warts should be managed in consultation with specialist.

18. Counseling about natural history, asymptomatic shedding, and sexual transmission is an essential component of herpes management.

19. The goal of suppressive therapy is to reduce recurrent symptomatic episodes and/or to reduce sexual transmission. Famciclovir appears somewhat less effective for suppression of viral shedding.

20. If HSV lesions persist or recur during antiviral treatment, drug resistance should be suspected. Obtaining a viral isolate for sensitivity testing and consulting with an infectious disease expert is recommended.

21. Benzathine penicillin G (generic name) is the recommended treatment for syphilis not involving the central nervous system and is available in only one long-acting formulation, Bicillin® L-A (the trade name), which contains only benzathine penicillin G. Other combination products, such as Bicillin® C-R, contain both long- and short-acting penicillins and are not effective for treating syphilis.

22. Persons with HIV infection should be treated according to the same stage-specific recommendations for primary, secondary, and latent syphilis as used for HIV-negative persons. Available data demonstrate that additional doses of benzathine penicillin G, amoxicillin, or other antibiotics in early syphilis do not result in enhanced efficacy, regardless of HIV status.

23. Alternates should be used only for penicillin-allergic patients because efficacy of these therapies has not been established. Compliance with some of these regimens is difficult, and close follow-up is essential. If compliance or follow-up cannot be ensured, the patient should be desensitized and treated with benzathine penicillin.

24. Some specialists recommend 2.4 million units of benzathine penicillin G q week for up to 3 weeks after completion of neurosyphilis treatment.

25. Pregnant women allergic to penicillin should be treated with penicillin after desensitization.